

Fig. 1: Identification of differentially expressed genes in a fluorescence differential display screen

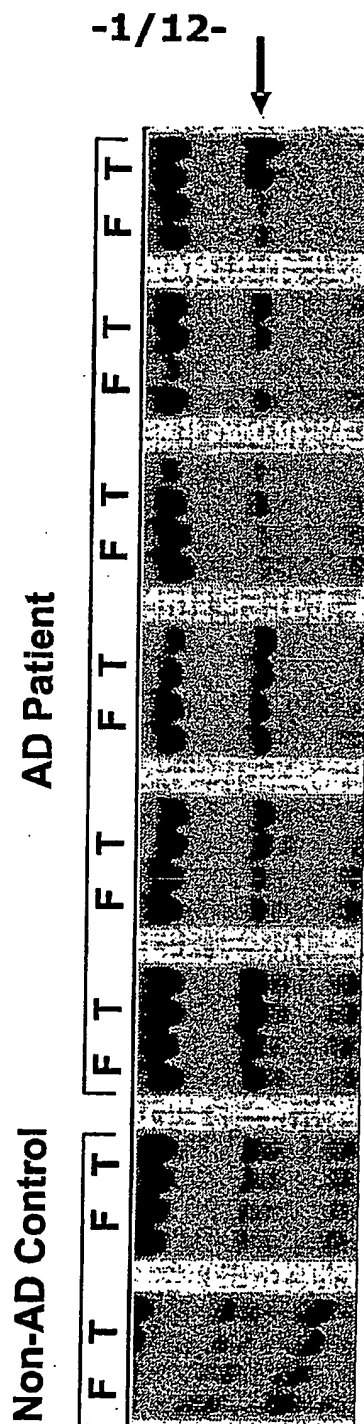
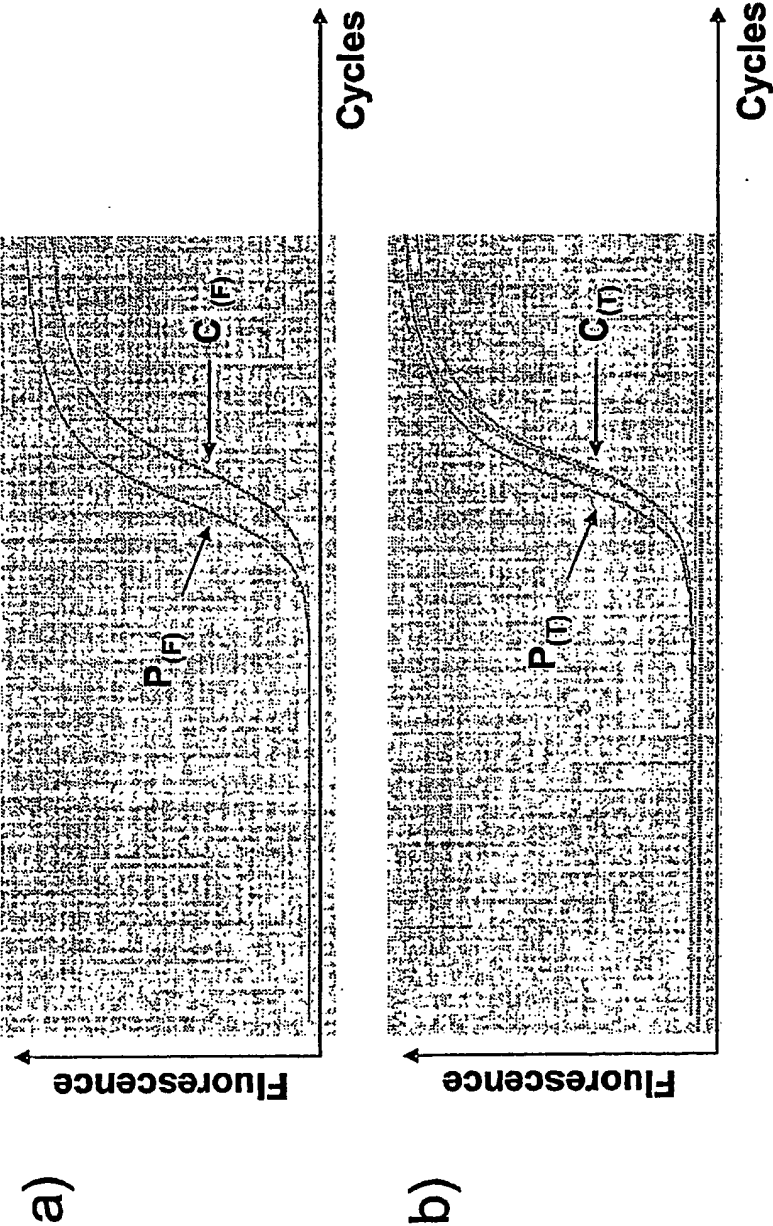
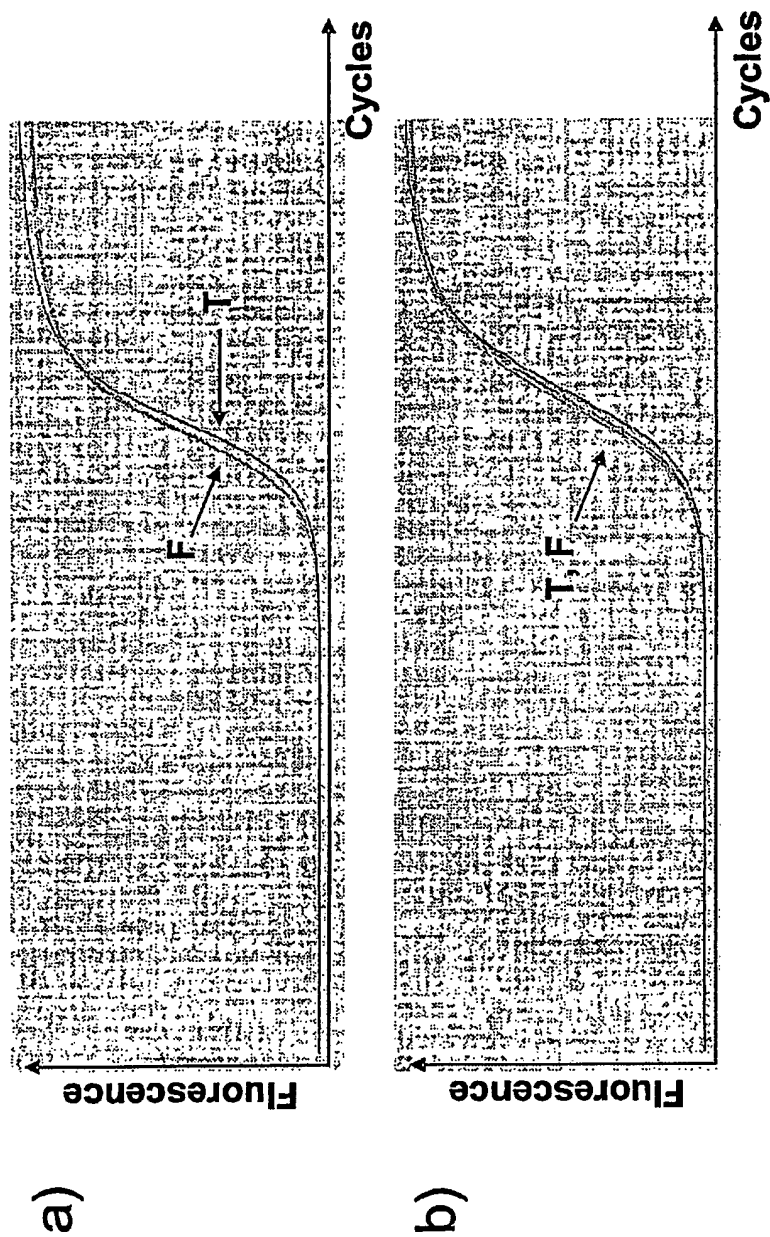


Fig. 2: Verification of differential expression of KCNE4 by quantitative PCR



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Fig. 3: Verification of differential expression of KCNE4 by quantitative PCR



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Fig. 4 : SEQ ID NO. 1:
amino acid sequence of
human KCNE4 protein

Length: 170 aa

```
1  MLKMEPLNST HPGTAASSSP LESRAAGGGS GNGNEYFYIL VVMSFYGIFL
51  IGIMLGYMKS KRREKKSSLL LLYKDEERLW GEAMKPLPVV SGLRSVQVPL
101 MLNMLQESVA PALSCTLCSM EGDSVSSESS SPDVHLTIQE EGADEELEET
151 SETPLNESSE GSSENIHQNS
```

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Fig. 5: SEQ ID NO. 2:
nucleotide sequence of
human KCNE4 cDNA

Length: 1204 bp

```
1  AGCAGAAGAA CCTCTTGGA CTGGACGATT TGGGAATTCA AAAC TTGGGA
51  CAAACTGTCA GCCTTGCCCC TGCTGTGGAG GCAGCCTCAA TGCTGAAAAAT
101 GGAGCCTCTG AACAGCACGC ACCCCGGCAC CGCCGCCCTCC AGCAGCCCCC
151 TGGAGTCCCG TCGGGCCGGT GCGGCGAGCG GCAATGGCAA CGAGTACTTC
201 TACATTCTGG TTGTCATGTC CTTCTACGGC ATTTTCTTGA TCGGAATCAT
251 GCTGGGCTAC ATGAAATCCA AGAGGCGGGA GAAGAAGTCC AGCCTCCTGC
301 TGCTGTACAA AGACGAGGAG CGGCTCTGGG GGGAGGCCAT GAAGCCGCTG
351 CCCGTGGTGT CGGGCCTGAG GTCGGTGCAG GTGCCCCCTGA TGCTGAACAT
401 GCTGCAGGAG AGCGTGGCGC CCGCGCTGTC CTGCACCCTC TGTTCATGG
451 AAGGGGACAG CGTGAGCTCC GAGTCCTCCT CCCC GGACGT GCACCTCACC
501 ATTCAGGAGG AGGGGGCAGA CGAGGAGCTG GAGGAGACCT CGGAGACGCC
551 CCTCAACGAG AGCAGCGAAG GGTCTCGGA GAACATCCAT CAGAATTCCT
601 AGACCCCCCG GGACCCCTGC GGGTGGCTCC ATCAGCCAGC AACCTTAGAG
651 AGAGGAAAGA CAGTTTTCAG GTGTCTGGTT TCACTTTCAC AGTGCGGCTG
701 CCACTTTGAA GAGACCTTGT GTAAACCCCT GATTCGGGGT GGGGTGGGGG
751 ACTAGGCTCA GCCGGAACCA GCACCTCCAA GGAGTCCGGG AGGTGCCTGT
801 GGTTTGCACC CACCACTGAA AAAGCCGCGG AGATGCGCAG CGCGTACACT
851 GACTTTGCGG CCTGGGTGTT GGGTTCTGA TCAGAATTTG GCGGGATGAT
901 ATGCTTGCCA TTTTCTCACT GGATGCCCTG GGTAGCTCCT GCAGGGTCTG
951 CCTGTTCCCA GGGCTGCCGA ATGCTTAGGA CACGCTGAGA GACTAGTTGT
1001 GATTGTCTAT TTTGCCTAGA GCTTTGTCCT TCTAGATCTG ATTGGCTGTA
1051 AGTATCTCTA CTGTGTACCT GTGGCATTCC TTCACAGTGG GTTACAAGCT
1101 TCTTTTGGAT TAGAGGGGGA TTTTGTATGG GAGAAAGCTG GAGATCTGAA
1151 CCCAGCCCAT TTGCACACTA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA
1201 AAAA
```

-6/12-**Fig. 6: SEQ ID NO. 3****Length: 193 bp**

```
1  TAGTGTGCAA ATGGGCTGGG TTCAGATCTC CAGCTTTCTC CCATCAAAAA
51. TCCCCCTCTA ATCCAAAAGA AGCTTGTAAC CCACTGTGAA GGAATGCCAC
101 AGGTACACAG TAGAGATACT TACAGCCAAT CAGATCTAGA AGGACAAAGC
151 TCTAGGCAAA ATAGCAAATC ACAACTAGTC TCTCAGCGTC ACC
```

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Fig. 7: SEQ ID NO. 4:

**nucleotide sequence of
human KCNE4 coding sequence**

Length: 513 bp

```
1  ATGCTGAAAA TGGAGCCTCT GAACAGCACG CACCCCGGCA CCGCCGCCTC
51  CAGCAGCCCC CTGGAGTCCC GTGCGGCCGG TGGCGGCAGC GGCAATGGCA
101 ACGAGTACTT CTACATTCTG GTTGTCTATG CCTTCTACGG CATTTCCTTG
151 ATCGGAATCA TGCTGGGCTA CATGAAATCC AAGAGGCGGG AGAAGAAGTC
201 CAGCCTCCTG CTGCTGTACA AAGACGAGGA GCGGCTCTGG GGGGAGGCCA
251 TGAAGCCGCT GCCCGTGGTG TCGGGCCTGA GGTCCGTGCA GGTGCCCCCTG
301 ATGCTGAACA TGCTGCAGGA GAGCGTGGCG CCCGCGCTGT CCTGCACCCT
351 CTGTTCCATG GAAGGGGACA GCGTGAGCTC CGAGTCCTCC TCCCCGGACG
401 TGCACCTCAC CATTCAAGAG GAGGGGGCAG ACGAGGAGCT GGAGGAGACC
451 TCGGAGACGC CCCTCAACGA GAGCAGCGAA GGGTCCTCGG AGAACATCCA
501 TCAGAATTCC TAG
```

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**Fig. 8: Alignment of SEQ ID NO. 2
with SEQ ID NO. 3**

Length: 193 bp

```
193 GGTGACGCTGAGAGACTAGTTGTGATTTGCTATTTTGCCTAGAGCTTTGT 144
    || |||||
978 GGACACGCTGAGAGACTAGTTGTGATTTGCTATTTTGCCTAGAGCTTTGT 1027
    |||||
143 CCTTCTAGATCTGATTGGCTGTAAGTATCTCTACTGTGTACCTGTGGCAT 94
    |||||
1028 CCTTCTAGATCTGATTGGCTGTAAGTATCTCTACTGTGTACCTGTGGCAT 1077
    |||||
93 TCCTTCACAGTGGGTTACAAGCTTCTTTTGGATTAGAGGGGGATTTTGA 44
    |||||
1078 TCCTTCACAGTGGGTTACAAGCTTCTTTTGGATTAGAGGGGGATTTTGA 1127
    |||||
43 TGGGAGAAAGCTGGAGATCTGAACCCAGCCCATTTCACACTA 1
    |||||
1128 TGGGAGAAAGCTGGAGATCTGAACCCAGCCCATTTCACACTA 1170
```


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**Fig. 9 : Alignment of KCNE4 RT-PCR
primers with human KCNE4 cDNA,
SEQ ID NO. 2**

```
1 GGTTCACCCACCACTGA 19
  |||||
801 GGTTCACCCACCACTGA 819

      19 TCAGAATTGGCGGGATGA 1
      |||||
881 TCAGAATTGGCGGGATGA 899
```

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**Fig. 10 : Schematic alignment of SEQ ID NO. 3
with human KCNE4 cDNA, SEQ ID NO. 2**

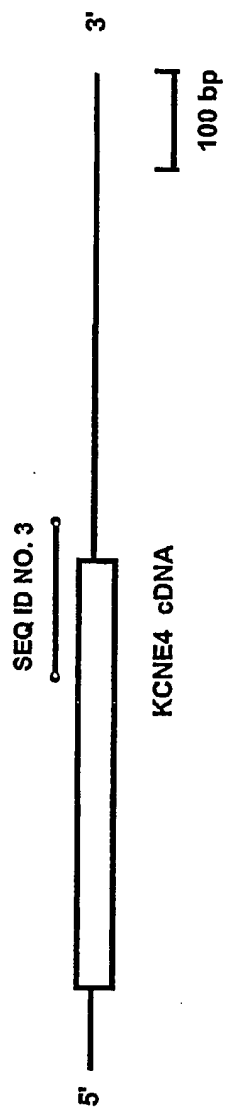
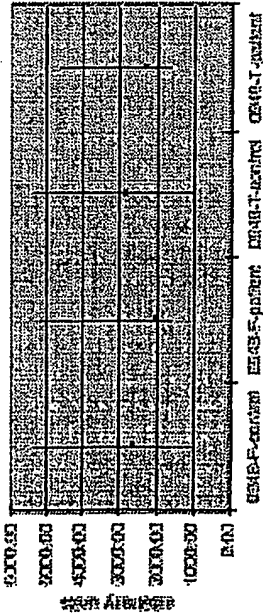


Fig. 11 : Analysis of absolute mRNA expression of KCNE4

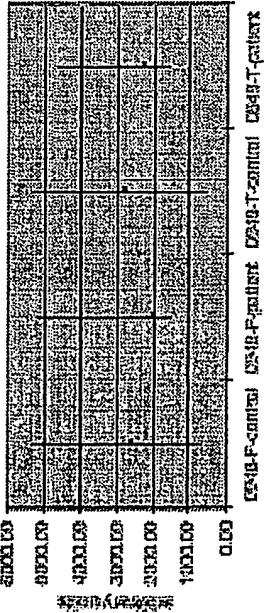
Comparison of Break 0-3 with 4-6

42150840



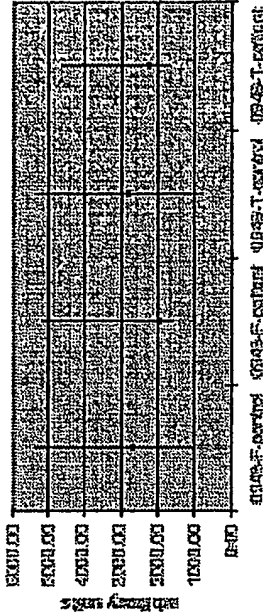
Comparison of Break 0-1 with 2-6

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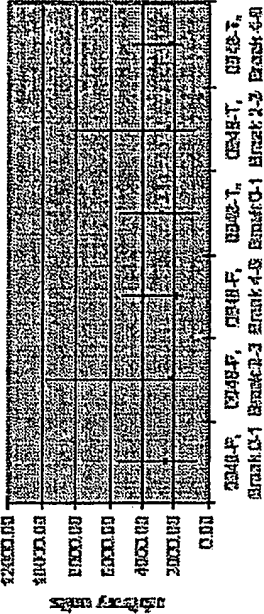
Comparison of Break 0-2 with Break 3-6

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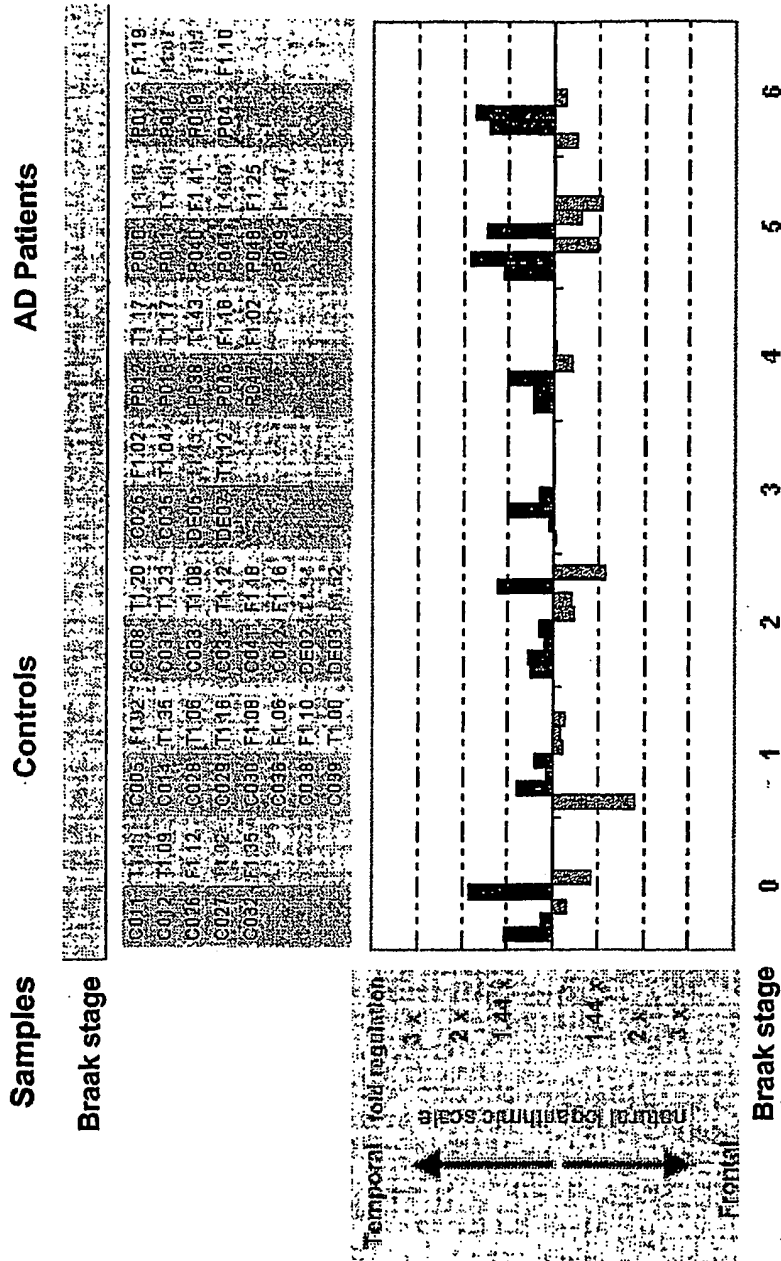
Comparison of Break 0-1 with 2-3 and 4-6

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Fig. 12 :



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